

85-200841/33 NIPPON CHEM IND KK 09.12.83-JP-231223 (06.07.85) COSD-01 Sustained release fused magnesium-potassium silicate fertilizer mfr. by mixing e.g. blast furnace slag with potassium cpd. fusing cooling and pulverising	C14-02, 5-A1A, 5-A1B, 5-82C, 12-M10, 12-N9) & 087
CR5-087724 Prepn. of sustained release type fused magnesium-potassium silicate fertilizer comprises mixing one or more of silica, conversion furnace slag, blast furnace slag, quartzite, nickel slag, stainless slag, ferromanganese slag, limestone, dolomite, quick lime, andesite, grass, wood or coal ash, alumin sand and serpentine, with a potassium cpd. In the mixt. the content of Al_2O_3 is 4-8 wt. %; the molar ratio $(CaO + MgO + K_2O + Al_2O_3)/SiO_2$ is 2-1.0; the mole % of SiO_2 is 4-50%; the molar ratio $(CaO + MgO)/SiO_2$ is 2-0.5. The mixt. is then fused by heating, followed by cooling and pulverising.	discarded as shown with excess applicn. of water-soluble potassium fertilizers. MATERIALS Potash cpds. used include potassium carbonate, potassium hydroxide, potash glass, etc. These are used in form of powder or flake. Pref. magnesia and boron components are added to the fertilizer. PREPARED The mixt. is fused in an electric furnace or rotary kiln, and heating temp. is 1,000-1,500°C. While the pulverized prod. can be used directly, it can be granulated together with alcohol fermentation waste liquid, sodium ligninsulphonate, pulp waste, etc. (7ppw108LHDWgNo0/0).
ADVANTAGES The fertilizer contains high contents of citric acid- soluble potassium and citric acid-soluble magnesium. Since it is only slightly water-soluble, it does not cause concn.	JG0127286-A